

REMARKS

This application has been carefully reviewed in light of the Office Action dated June 13, 2005. Claims 1-13, 15-20, 22 and 25-30 are in the application, all of which Claims 1, 13, 25, 26 and 30, the independent claims, have been amended to define still more clearly what Applicants regard as their invention. A corresponding change has been made to dependent Claim 2. Reconsideration and further examination are respectfully requested.

Applicants note with appreciation the indication that Claims 4, 5, 16 and 17 would be allowable if rewritten so as not to depend from a rejected claim. These claims have been so rewritten because, for the reasons set out below, their respective base claims are believed to be in condition for allowance.

Claims 1-3, 6-13, 15, 18-20, 22 and 25-30 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patents 5,767,876 (Koike et al.) and 5,633,663 (Matsubara et al.), taken in combination.

Independent Claim 1 is directed to a color ink-jet recording apparatus using a black recording head that ejects black ink on the basis of black image data and a color recording head that ejects color ink on the basis of color image data, the color ink being such that it permeates through a recording medium at a higher speed than does the black ink. The apparatus comprises control means for controlling scanning of the black recording head and of the color recording head relative to the recording medium such as to complete a record image in a predetermined recording area including pixels on the recording medium by causing the black recording head and the color recording head each to perform a plurality of recording scans in the same pixel.

Also provided according to Claim 1 is a data generating means, which, for each of the recording heads, generates image data for each of the recording scans corresponding to the predetermined recording area, by using mask patterns, so that black image data corresponding to the predetermined recording area are allotted to each of the recording scans, and color image data corresponding to the predetermined recording area are allotted to each of the recording scans. According to Claim 1, an allotment rate of the mask pattern for the black image data used in a given one of the recording scans is greater than an allotment rate of the mask pattern for the color image data used in that one recording scan, and an allotment rate of the mask pattern for the black image data used in another recording scan is smaller than an allotment rate of the mask pattern for the color image data used in the latter recording scan.

Koike has been adequately discussed in previous papers, and it is not deemed necessary to repeat that discussion in full. As to *Matsubara*, Applicants present the following arguments.

Matsubara relates to a procedure in which black and color use different mask patterns from each other (see Fig. 28). That Fig. shows four-pass printing in which black uses the mask at a 50% duty ratio in each pass, and thus printing of a total 200% duty ratio is carried out. This printing is carried out for the purpose of emphasizing black. C, M and Y colors, which are not emphasized, use the mask at a 25% duty ratio in each pass, and thus printing with a total 100% duty ratio is carried out. Even if *Matsubara* describes a process in which the mask patterns for the black image and color image data used during the same recording scan have different allotment rates, however, Applicants submit that in the *Matsubara* system, for all passes (recording scans), the allotment rate of the mask pattern for the black image data used in a recording scan is *greater* than that of the mask

pattern for the color image data used in the same recording scan. Applicants submit that nothing in *Matsubara* would teach or suggest any arrangement or method in which not only is an allotment rate of the mask pattern for black image data used in a recording scan greater than an allotment rate of the mask pattern for the color image data used in that recording scan, but also, an allotment rate of the mask pattern for black image data used in an other recording scan is *smaller* than an allotment rate of the mask pattern for color image data used in the latter recording scan, as is recited in Claim 1. Accordingly, even if *Matsubara* and *Koike* are combined in the manner proposed in the Office Action (and even assuming such combination would be permissible), Applicants submit that Claim 1 is clearly allowable over those patents..

The other independent claims each contain recitations sufficiently similar to those of Claim 1 that the foregoing arguments apply also to the other independent claims, which therefore are also believed to be allowable over the art discussed above.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

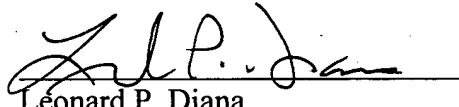
This Amendment After Final Action is believed clearly to place this application in condition for allowance and its entry is therefore believed proper under 37

C.F.R. § 1.116. In any event, however, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, he is respectfully requested to contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and allowance of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,


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